User manual

Rev. 1.2 (17/04/2015)

CompactPCI Serial power supply

CompactPCI Serial power supply (for illustration only)

CompactPCI Serial is a new standard that supports the fast serial protocols PCI Express, Serial ATA, USB and Ethernet. The payload power is +12 V. For wake-up events an additional +5 V Stdby voltage is defined. The Schroff pluggable CompactPCI Serial power supply is developed in accordance to the power definition within the CompactPCI Serial specification PICMG CPCI-S.0.

The power supply is a 3 U, 8 HP unit and fits into a 3 U subrack slot by using the off-set card guides. The mains voltage is fed through the connector on the back. Pentair offers the mating power backplanes as well as CompactPCI Serial backplanes with the mating connector installed.

Main features

Total power	Input voltage	Output voltage 1	Output voltage 2
300 W	90-264 VAC	+12 V	+5 V Standby

- Active power factor correction
- Wide range input
- Active current share – single wire
- Remote sensing
- N+1 redundancy
- PS present
- Power fail
- PS_ON
- Enable
- Temperature monitoring
- I2C interface
- Hot pluggable
- UL, cUL and DEMKO
- CE compliant

PENTAIR

ENVIRONMENTAL SPECIFICATIONS

- Humidity: Up to 95% non-condensing
- Storage temperature: -40° to +85°C
- Temperature coefficient: ±0.01% / °C
- Ambient operating temperature: -40 to +70°C continuous duty, full rating.
- Cooling: forced air cooling required

SAFETY APPROVALS

• UL:	60950-1:2005 (2nd Edition); Am 1:2009
• CUL:	60950-1:2005 (2nd Edition); Am 1:2009
• DEMKO:	EN 60950-1:2006, EN 60950-1:2006/A11:2009 EN 60950-1:2006/A1:2010 EN 60950-1:2006/A12:2011

ELECTRICAL SPECIFICATIONS

Input specifications

Input range	90-264 V_{AC}
Frequency	50-60 Hz
EMI filter	EN55022 Class B, FCC Part 15
Inrush current	<32 A @ 230 V_{AC}
Input current	1.3 A @ 264 V_{AC} (1,45 A@230)
Isolation	4242 V_{DC} (input to output)
Efficiency	>90% @ 230 V_{AC}
Active PFC	0.99
Switching frequency	134 KHz
Leakage	<300 uA

Main output specifications

DC output	Maximum continuous output power 300 W with minimum 10 CFM fan cooling required.
Line Regulation	±2 %
Load Regulation	±2 %
Ripple and Noise	1 % Pk to Pk
Transient Response	2 % maximum deviation; returns to initial condition in 1 msec max.

Output specifications

• Long term stability	0.01 % after 20 minute warm-up
• Hold-up time	20 msec minimum
• OVP	Set at 115 % to 135 %. Latching method. AC must be recycled to restart the unit
• Short-circuit protection	The units will withstand a continuous short without damage. It will automatically return to regulation upon removal of the short
• Overload protection	The overload protection feature will reduce the output voltage to a safe dissipation level when the output power rating exceeds 110 % of maximum rated power. The unit will automatically return to regulation upon removal of the overload
• ORing FET	ORing FET provided for redundant operation

- Active current share (S2) — 12V output will current share within 5% when interconnected by a single wire
- Passive current share — 5 VSBY droop type
- Remote sensing (R2/E3) — on 12V output only
- PS_ON (F3) — Digital Input: A logic low enables the Main output of the supply. A low shall not source more than 1 mA of current
- Enable (R6) — Digital Input. When driven high, main output is disabled. When Low, power supply main output state is as controlled by PS_ON
- FAL/PWR_FAIL (U2) — Digital output, Open Collector, driven high when outputs are in regulation. It will go low a minimum of 1 mS prior to output going out of regulation
- DEG (U5) — Open Collector, temperature warning signal default setting at 85°C will change signal state from Hi to Low or Low to Hi (signal and temperature preferences programmable at factory)
- PS Present (H3) — Digital Output. Pulled low via 100 Ohm resistor
- Thermal Protection — The power supply has a built in thermal sensor to protect against abnormal temperature conditions
- I²C/PMBUS — Monitors temperature, output voltage, and output current, connects to a serial NVRAM which is programmed with serial number. PMBUS Standard to allow monitoring of overall operation of power supply
- LED Indicators — The power supply will have two LED's providing the power supply status:

Status	Indication
All outputs are operating within spec	Steady Green
Standby (PSON disabled)	Blinking Green
Voltage or Temperature warning	Blinking Yellow
Voltage or Temperature fault	Steady Yellow
PSKILL and/or power supply off	NO LED's

OVERALL MECHANICAL DIMENSIONS

Not including face plate and connector
6.40"L x 3.94"H x 1.47"W
162.5mm x 100mm x 37.34mm

Including face plate and connector:
6.67"L x 5.06"H x 1.59"W
169.4mm x 128.5mm x 40.3mm

NOTES

- Specifications subject to change without notice.
- All dimensions in inches/mm
- Weight: Approx. 1.6lbs (0.68Kg)

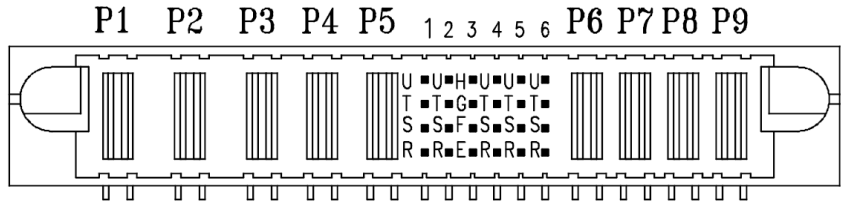
VOLTAGE/CURRENT RATING CHART

Item number	Assignment	Voltages	Minimum	Maximum
11098-538	V1	12 V	0 A	25.0 A
	V2	5 VSB	0 A	2.5 A

CONNECTOR

Input/Output……..FCI Connector 51939-667

Pinout



P1	P2	P3	P4	P5	U1	U2	H3	U4	U5	U6	P6	P7	P8	P9
LINE	NEUTRAL	GND	NU	NU	NU	FAL / PWR_FAIL	PS PRESENT	COM	DEG	5V STBY	COM	COM	+12V OUT	+12V OUT
					T1	**T2**	**G3**	**T4**	**T5**	**T6**				
					NU	NU	COM	A0	5V STBY	5V STBY				
					S1	**S2**	**F3**	**S4**	**S5**	**S6**				
					NU	12V CS	PSON	A1	SCL	COM				
					R1	**R2**	**E3**	**R4**	**R5**	**R6**				
					NU	-VS	+VS	A2	SDA	ENABLE				

H3, G3, F3 and E3 are shorter pins

Warranty conditions

Duration

This product has a warranty of 2 years. The warranty begins on the day of delivery

Cover of defects

Within the warranty period Schroff will repair free of charge any faulty functioning of the product resulting from faulty design or defective material. All other claims under the warranty are excluded, in particular consequential damage.

Warranty exclusion

The warranty does not cover damage or functional defects caused by non-adherence to the Company´s operating instructions or such caused by dropping, knocking, contamination or other untoward handling. The warranty is invalidated if the product is opened by unauthorized personnel, tampered with or the serial number on the product has been changed or rendered illegible.

Claims under warranty

This product has been carefully checked. If you have a valid claim, please return the product to SCHROFF. In order to make a claim under the warranty, ensure that the following is carried out:

- Include a detailed description of the fault.
- The product should be returned in the original

carton or similar packaging, insured and postpaid.